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**MULTI-DEPTH
SOIL GAS SURVEY REPORT**

**CONTINENTAL HEAT TREATING
10643 SOUTH NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA**

Prepared for:

**Continental Heat Treating
10643 South Norwalk Boulevard
Santa Fe Springs, California 90670**

Prepared by:

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Project No. EST1315

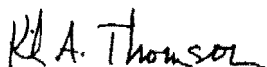
May 8, 1996

LIMITATIONS AND WARRANTIES

This Multi-Depth Soil Gas Survey Report has been prepared for the exclusive use of Continental Heat Treating and assigned interested parties. The report has been prepared in accordance with generally accepted environmental assessment practices. No other warranty, expressed or implied, is made.

The information provided in this report is based on measurements performed in specific areas during a specific limited period of time. In the event that any changes occur in waste management practices, site conditions, or uses of the property, the conclusions and recommendations contained in this Multi-Depth Soil Gas Survey Report should be reviewed and modified or verified in writing by Environmental Support Technologies, Inc. (EST).

There is no investigation which is thorough enough to absolutely exclude the presence of hazardous material at the project site. Therefore, if none are identified as part of a limited investigation, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of an investigation. EST, despite the use of reasonable care and a commitment to professional excellence, may not identify the presence of hazardous materials and hazardous compound concentrations in soil, soil gas, and/or groundwater. EST assumes no responsibility for conditions not investigated or for conditions not generally recognized as environmentally unacceptable, at the time of the investigation.



Kirk A. Thomson, R.G., R.E.A.
Project Manager/Principal Hydrogeologist

1.0 INTRODUCTION

On May 2, 1996, Environmental Support Technologies, Inc. (EST), at the request of Continental Heat Treating (CHT), performed a multi-depth soil gas survey at the CHT site located at 10643 Norwalk Boulevard in Santa Fe Springs, California. The multi-depth soil gas survey included the installation of fifteen (15) soil gas sampling probes, including thirteen (13) 5-foot probes and two (2) 15-foot probes. Soil gas samples were collected and analyzed on-site for volatile organic compounds (VOCs) including halogenated and aromatic hydrocarbons. The multi-depth soil gas survey was performed based on requirements put forth by the County of Los Angeles Fire Department, Site Mitigation Unit, Health Hazardous Materials Division (LACFD). This Multi-Depth Soil Gas Survey Report was prepared based on soil gas sample analyses data collected during the survey.

2.0 OBJECTIVES OF THE SOIL GAS SURVEY

The objectives of the soil gas survey were to:

- Aid in identifying potential vadose zone source areas of VOCs including halogenated and aromatic hydrocarbons.
- Assess the lateral and limited vertical extent of VOCs in ^{near} surficial soils.

Soil gas sampling is a monitoring technique for the presence of VOCs in soil and should be used in conjunction with other site-specific data. Soil gas sampling is limited its applications depending on site conditions. Some factors affecting the distribution of VOCs in the subsurface are listed in Appendix A.

3.0 RATIONALE FOR THE LOCATIONS OF SAMPLING SITES

The approximate locations of soil gas sampling probes are shown in Figure 1. The locations of soil gas probes were selected based on previous soil sampling data (Green Environmental, Inc., February 6, 1995) and conversations with Mr. George Baker of the LACFD. Probes were located in the vicinity of a former above-ground vapor degreaser and along the northern perimeter of the site.

4.0 METHODS AND PROCEDURES

The soil gas survey was performed in general accordance with Los Angeles Regional Water Quality Control Board's (LARWQCB) "Requirements for Active Soil Gas Investigation" dated March, 1994. George F. Baker of the LACFD informed EST personnel that the March, 1994 LARWQCB protocols for soil gas surveys are acceptable to the LACFD.

4.1 SOIL GAS PROBE INSTALLATION AND COMPLETION

Construction of a typical soil gas sampling probe is shown in Figure 2. Soil gas probes were installed using either a percussion-hammer or hydraulic-ram. Once a probe was installed to the desired depth, the hollow probe drive-rod was withdrawn, leaving the stainless steel probe point and NylaflowTM sampling tube in the sub-surface. Silica sand was poured around the probe tip to allow for diffusion of soil vapors. The remaining annulus was filled with hydrated bentonite/cement slurry to grade. The probe point and sampling tube assembly were left in place (dedicated) as a long-term soil gas monitoring point. The sampling tube was plugged with a stainless-steel machine-screw, folded over, and pushed down-hole until slightly below grade. The remaining depression was filled with concrete patch material and finished flush with surrounding paving material.

4.2 SOIL GAS SAMPLE COLLECTION AND HANDLING

Soil gas samples were collected using the soil gas sampling system shown in Figure 3. The soil gas sampling system was constructed of stainless-steel, glass, NylaflowTM, and TeflonTM components. Instrumentation associated with the sampling system included a calibrated flow-meter and vacuum gage. Vacuum integrity of the sampling system was tested prior to, and after the soil gas survey using leak-down testing methods. The soil gas sampling system and instrumentation were operating as required on both occasions. Soil gas sampling probes were purged at a flowrate of about 100 milliliters per minute (ml/min).

A site-specific probe purge volume versus sample concentration test was initially performed to evaluate the appropriate volume of gas to be purged from each probe prior to sample collection. Time-series sampling of at least one probe was conducted to evaluate trends in soil gas concentrations as a function of purge volume. After purging, soil gas samples were withdrawn from the sample stream using a glass syringe fitted with a disposable needle and MininertTM gas-tight valve. Soil gas samples were immediately injected into a gas chromatograph (GC) after collection.

4.3 SOIL GAS SAMPLE ANALYSES

Soil gas samples were analyzed in the field using a mobile laboratory equipped with a VarianTM-3400 GC configured with a photo-ionization detector (PID) and an electrolytic conductivity detector (ELCD) placed in series. The GC-PID/ELCD was used to analyze soil gas samples using a method similar to EPA Method 8010/8020. The detection limits for 8010/8020 compound analyses were one microgram per liter ($\mu\text{g/L}$).

4.4 INITIAL MULTI-POINT EQUIPMENT CALIBRATION

A summary of the Quality Assurance/Quality Control (QA/QC) analyses is presented in Table 1. The GC-PID/ELCD used for soil gas analyses was calibrated using high-purity solvent-based standards obtained from certified vendors. GC-PID/ELCD calibration standards were prepared in high-purity methanol solvent. GC-PID/ELCD calibration

using solvent-based standards was performed using varying injection volumes of the undiluted solvent-based standard. If necessary, stock solvent-based standards were diluted to an appropriate concentration. Diluted standards were prepared by introducing a known volume of stock solvent-based standard into a known volume of high-purity solvent.

Initial calibration was performed for 25 target compounds. The GC-PID/ELCD was calibrated using three standard injections to establish a three-point calibration curve. The lowest standard was not higher than five times the method detection limit (or 5 µg/L). The percent relative standard deviation (%RSD) of the response factor(RF) for each target compound did not exceed 20 percent except for trichlorofluoromethane (FreonTM-11), dichlorodifluoromethane (FreonTM-12), 1,1,2-trichloro-trifluoroethane (FreonTM-113), chloroethane (CE), and vinyl chloride (VC), which did not exceed 30 %RSD. Identification and quantitation of compounds in the field was based on calibration under the same analytical conditions as for three-point calibration.

4.5 LABORATORY CONTROL SAMPLE

A laboratory control sample (LCS) from a different source or lot number other than the initial calibration standard was used to verify the true concentration of the initial calibration standard. The LCS included LARWQCB target compounds, and the RF for each compound was within 15 percent of the initial calibration.

4.6 DAILY MID-POINT CALIBRATION CHECK

Daily field calibration of the GC-PID/ELCD consisted of a mid-point calibration using a standard containing 14 target compounds. The daily mid-point calibration check included the 12 target compounds specified in LARWQCB requirements dated March 1994. The RF of each compound (except for FreonTM -11, -12, and -113, CE, and VC) was within 15 percent of the average RF from the initial calibration. The RF for FreonTM -11, -12, and -113, CE, and VC were within 25 percent of the initial calibration. If these criteria were not met, the GC-PID/ELCD was recalibrated. Daily calibration was performed prior to the first soil gas sample analysis of the day. One-point calibration was performed for all compounds detected at the site to ensure accurate quantitation. Subsequent calibration episodes, if deemed necessary, consisted of at least one injection of the standard exhibiting a similar detector response as that of samples encountered in the field.

4.7 BLANK INJECTIONS

The syringes used for soil gas sample collection were periodically filled with ambient air or high-purity carrier-grade gas from a compressed gas cylinder. The ambient air or high-purity gas was injected directly into the gas chromatograph. The blank injections served to detect potential cross-contamination of the sampling equipment and to verify the effectiveness of decontamination procedures.

4.8 END OF DAY GC TEST RUN

A LCS was analyzed at the end of each field day. The LCS contained the same compounds as the daily mid-point calibration standard (minimum of 12 compounds). The LCS was procured from a source other than the initial multi-point calibration standard. The RF for each LCS compound was within 20 percent of the average RF for the initial calibration. If these criteria were not met, additional LCSs were analyzed.

4.9 DECONTAMINATION PROCEDURES

Probe installation and sampling equipment in contact with site soil or soil gas sample streams were decontaminated prior to collection of each soil gas sample.

Decontamination of probe installation equipment was performed by immersion and scrubbing in Alconox™ detergent solution, rinsing in tap-water, rinsing in VOC-free water, followed by air drying. Decontamination of soil gas sampling equipment was performed by baking at elevated temperatures (<160° Celsius) inside the GC oven.

4.10 REPORTING OF SAMPLE RESULTS AND QA/QC INFORMATION

Reporting of sample analyses results and QA/QC information is in general accordance with the Los Angeles Regional Water Quality Control Board's "QA/QC and Reporting Requirements for Soil Gas Investigation" dated March 1994.

5.0 SOIL GAS SURVEY RESULTS

Soil gas samples collected at the site contained concentrations of vinyl chloride (VC), 1,1-dichloroethene (DCE), trans-1,2-dichloroethene, (T-DCE), cis-1,2-dichloroethene (C-DCE), chloroform (CFM), trichloroethene (TCE), tetrachloroethene (PCE), ethylbenzene (EBENZ), meta- and para-xylene (M+P-XYL), and ortho-xylene (O-XYL). A summary of field analyses results is provided in Table 2. Detected concentrations of PCE in soil gas samples are shown in Figure 4. Field analyses reports for soil gas samples, GC-PID/ELCD calibration data, and method detection limits are provided in Appendix B.

5.1 VINYL CHLORIDE (VC)

Concentrations of VC were detected in 3 of 15 sampled soil gas probes. Detected concentrations of VC ranged from 4 µg/L in Probe SG11-5 to 211 µg/L in Probe SG15-15.

5.2 1,1-DICHLOROETHENE (DCE)

Concentrations of DCE were detected in 2 of 15 sampled soil gas probes. Concentrations of 7 µg/L and 17 µg/L of DCE were detected in Probes SG13-5 and SG15-15, respectively.

5.3 TRANS-1,2-DICHLOROETHENE (T-DCE)

Concentrations of T-DCE were detected in 3 of 15 sampled soil gas probes. Detected concentrations of T-DCE ranged from 9 $\mu\text{g/L}$ in Probe SG9-5 to 174 $\mu\text{g/L}$ in Probe SG13-5.

5.4 CIS-1,2-DICHLOROETHENE (C-DCE)

Concentrations of C-DCE were detected in 7 of 15 sampled soil gas probes. Detected concentrations of C-DCE ranged from 3 $\mu\text{g/L}$ in Probe SG12-5 to 756 $\mu\text{g/L}$ in Probe SG13-5.

5.5 CHLOROFORM (CFM)

A concentration of 1 $\mu\text{g/L}$ of CFM was detected in a soil gas sample collected from Probe SG14-15.

5.6 TRICHLOROETHENE (TCE)

Concentrations of TCE were detected in 7 of 15 sampled soil gas probes. Detected concentrations of TCE ranged from 3 $\mu\text{g/L}$ in Probe SG12-5 to 246 $\mu\text{g/L}$ in Probe SG13-5.

5.7 TETRACHLOROETHENE (PCE)

Concentrations of PCE were detected in 12 of 15 sampled soil gas probes. Detected concentrations of PCE ranged from 2 $\mu\text{g/L}$ in Probe SG6-5 to 41,300 $\mu\text{g/L}$ in Probe SG14-15.

5.8 ETHYLBENZENE (EBENZ)

Concentrations of EBENZ were detected in 3 of 15 sampled soil gas probes. Detected concentrations of EBENZ ranged from 3 $\mu\text{g/L}$ in Probe SG11-5 to 36 $\mu\text{g/L}$ in Probe SG15-15.

5.9 META- and PARA-XYLENE (M+P-XYL)

Concentrations of M+P-XYL were detected in 3 of 15 sampled soil gas probes. Detected concentrations of M+P-XYL ranged from 3 $\mu\text{g/L}$ in Probe SG11-5 to 24 $\mu\text{g/L}$ in Probe SG15-15.

5.10 ORTHO-XYLENE (O-XYL)

Concentrations of O-XYL were detected in 3 of 15 sampled soil gas probes. Detected concentrations of O-XYL ranged from 3 $\mu\text{g/L}$ in Probe SG11-5 to 21 $\mu\text{g/L}$ in Probe SG15-15.

TABLE 1
SUMMARY OF
QUALITY ASSURANCE/QUALITY CONTROL ANALYSES
FOR SOIL GAS SURVEYS

CALIBRATION AND LABORATORY CONTROL SAMPLES		
DESCRIPTION	FREQUENCY	PRECISION GOAL %RSD or %DIFF
INITIAL THREE-POINT CALIBRATION (25 Target Compounds)	At the beginning of the soil gas survey, unless the RPDs of the initial laboratory check sample or daily mid-point calibration check samples exceed their goals.	20-30 (1)
INITIAL LABORATORY CONTROL SAMPLE (LCS) (25 Target Compounds)	At the beginning of the survey, following the initial three-point calibration.	15 (2)
DAILY MID-POINT CALIBRATION CHECK (12 Target Compounds)	At the beginning of each day.	15 (3) 25 (3)
LAST GC TEST RUN (12 Target Compounds)	At the end of each day.	20 (4)
FIELD CONTROL SAMPLES		
DESCRIPTION	FREQUENCY	PRECISION GOAL
BACKGROUND SAMPLE (5)	Minimum one per day.	N/A
SYRINGE BLANK (5)	Minimum one per day.	N/A

%RSD = Percent Relative Standard Deviation calculated based on the initial three-point calibration.

%DIFF = Percent Difference between the response factor obtained from the LCS, the daily mid-point calibration, or the last GC test run and the average response factor initially calculated based on the three-point calibration.

N/A = Not applicable.

(1) The %RSD goal for the initial three-point calibration will be 20 percent for all compounds except for Freon 11, Freon 12, Freon 113, chloroethane, and vinyl chloride for which the %RSD goal is 30 percent.

(2) The %DIFF goal for the LCS will be 15 percent for all target compounds.

(3) The %DIFF goal for the daily mid-point calibration check will be 15 percent for all compounds except for Freon 11, Freon 12, Freon 113, chloroethane, and vinyl chloride for which the %DIFF goal is 25 percent.

(4) The %DIFF goal for the last GC test run will be 20 percent for all compounds except for Freon 11, Freon 12, Freon 113, chloroethane, and vinyl chloride for which the %DIFF goal is 30 percent.

(5) A syringe/background sample will be analyzed using ambient air. If volatile organic compounds (VOCs) are not detected, the ambient air sample will represent the background sample and syringe blank. If VOCs are detected in the ambient air sample, a syringe blank will be analyzed using ultra-high-purity helium or nitrogen gas.

TABLE 2

SUMMARY OF FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES

CONTINENTAL HEAT TREATING SITE
10643 SOUTH NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA

PROBE NUMBER	DATE OF SAMPLING	PROBE DEPTH (ft)	SAMPLING EVENTS	VC (ug/L)	DCE (ug/L)	T-DCE (ug/L)	C-DCE (ug/L)	CFM (ug/L)	TCE (ug/L)	PCE (ug/L)	EBENZ (ug/L)	M+P-XYL (ug/L)	O-XYL (ug/L)
SG1-5	5/2/96	5'	3	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	5	ND<1	ND<1	ND<1
SG2-5	5/2/96	5'	1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
SG3-5	5/2/96	5'	1	ND<1	ND<1	ND<1	6	ND<1	5	3	ND<1	ND<1	ND<1
SG4-5	5/2/96	5'	2	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	198	ND<1	ND<1	ND<1
SG5-5	5/2/96	5'	1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
SG6-5	5/2/96	5'	1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2	ND<1	ND<1	ND<1
SG7-5	5/2/96	5'	2	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	58	ND<1	ND<1	ND<1
SG8-5	5/2/96	5'	1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	4	ND<1	ND<1	ND<1
SG9-5	5/2/96	5'	2	ND<1	ND<1	9	35	ND<1	14	12	ND<1	ND<1	ND<1
SG10-5	5/2/96	5'	1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
SG11-5	5/2/96	5'	2	4	ND<1	ND<1	71	ND<1	88	240	3	3	3
SG12-5	5/2/96	5'	1	ND<1	ND<1	ND<1	3	ND<1	3	6	ND<1	ND<1	ND<1
SG13-5	5/2/96	5'	4	74	7	174	756	ND<1	246	144	5	7	4
SG14-15	5/2/96	15'	3	ND<1	ND<1	ND<1	6	1	30	41,300	ND<1	ND<1	ND<1
SG15-15	5/2/96	15'	4	211	17	114	269	ND<1	225	3,040	36	24	21

ft. = feet below grade

ug/L = micrograms per liter

ND = Not Detected; sample is below the reported detection limit

VC = Vinyl Chloride

DCE = 1,1-Dichloroethene

T-DCE = trans-1,2-Dichloroethene

C-DCE = cis-1,2-Dichloroethene

CFM = Chloroform

TCE = Trichloroethene

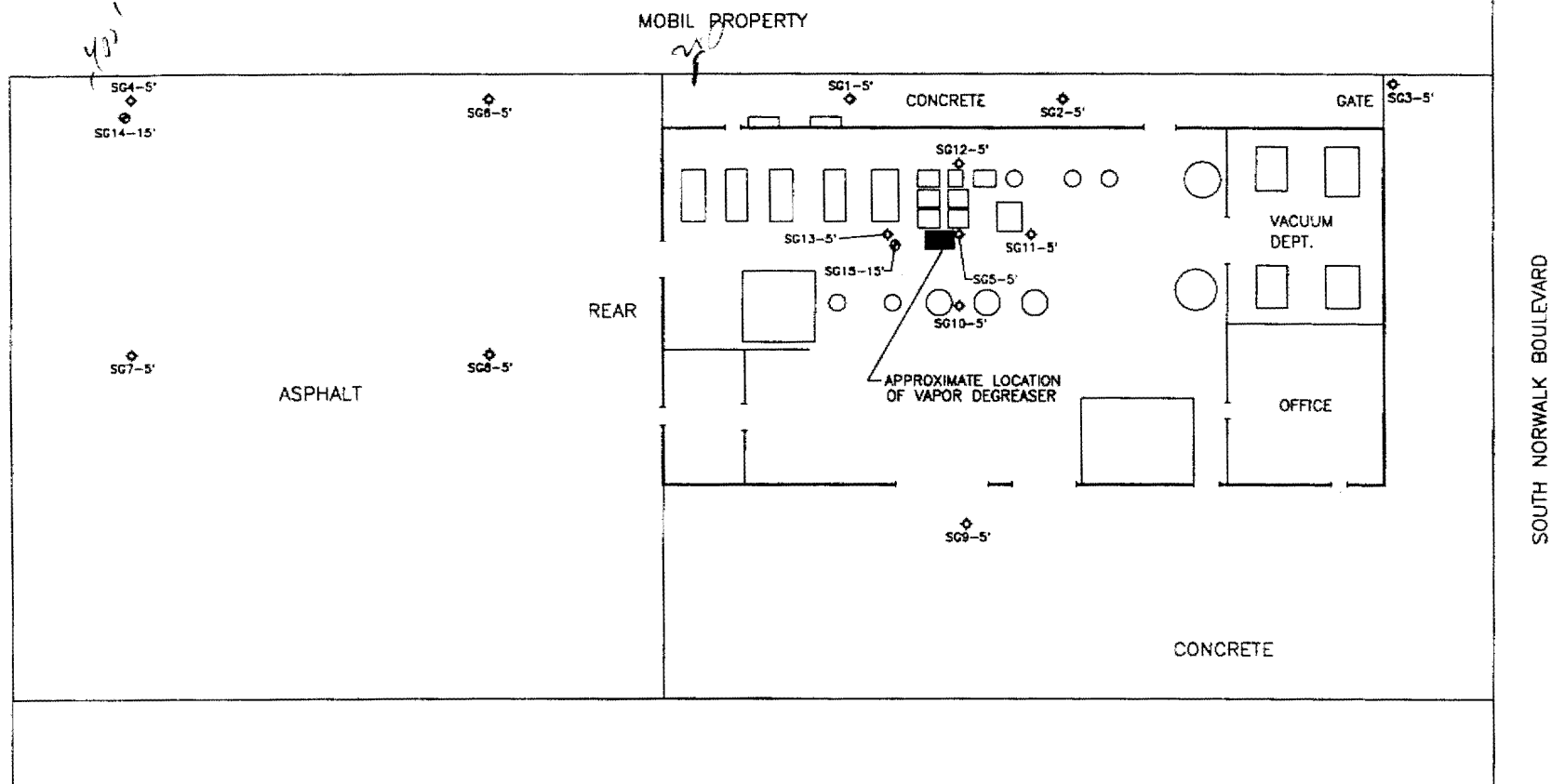
PCE = Tetrachloroethene

EBENZ = Ethylbenzene





M+P-XYL

O-XYL = ortho-Xylene

NOTE: Values shown are the highest detected in each probe within calibration range.



EXPLANATION

-  SG1-5' APPROXIMATE LOCATION OF A 5-FOOT SOIL GAS SAMPLING PROBE WITH ASSOCIATED PROBE NUMBER AND PROBE DEPTH
-  SG15-15' APPROXIMATE LOCATION OF A 15-FOOT SOIL GAS SAMPLING PROBE WITH ASSOCIATED PROBE NUMBER AND PROBE DEPTH
-  FURNACES
-  FURNACES

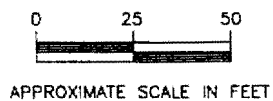


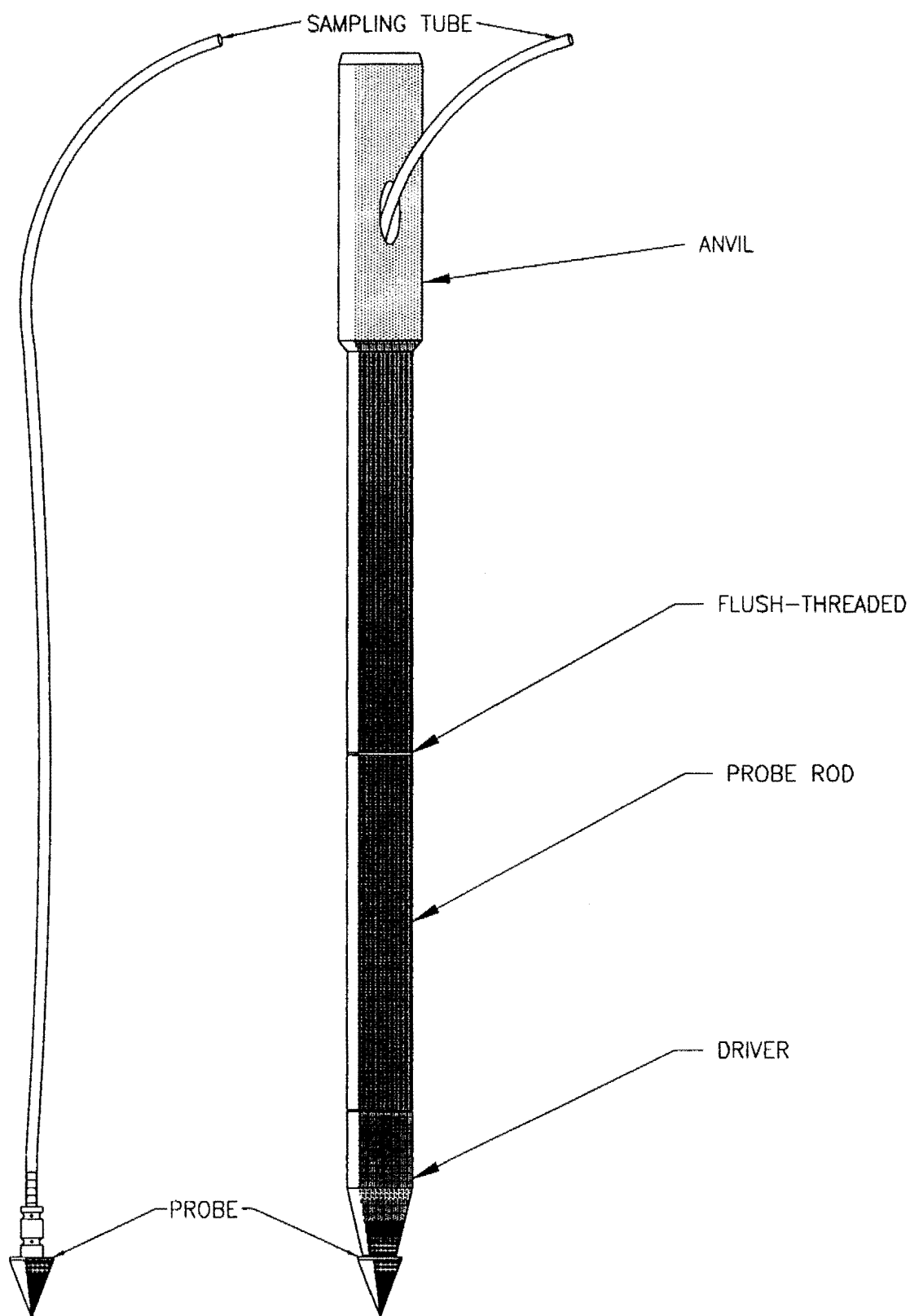
FIGURE 1

APPROXIMATE LOCATIONS OF
SOIL GAS SAMPLING PROBES
CONTINENTAL HEAT TREATING, INC.
10643 SOUTH NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA
EST1315 / SOIL GAS SURVEY

DRAWN BY: JST

SCALE: AS SHOWN

DATE: 5-7-1996



DEDICATED PORTION OF PROBE

NOTE: NOT TO SCALE

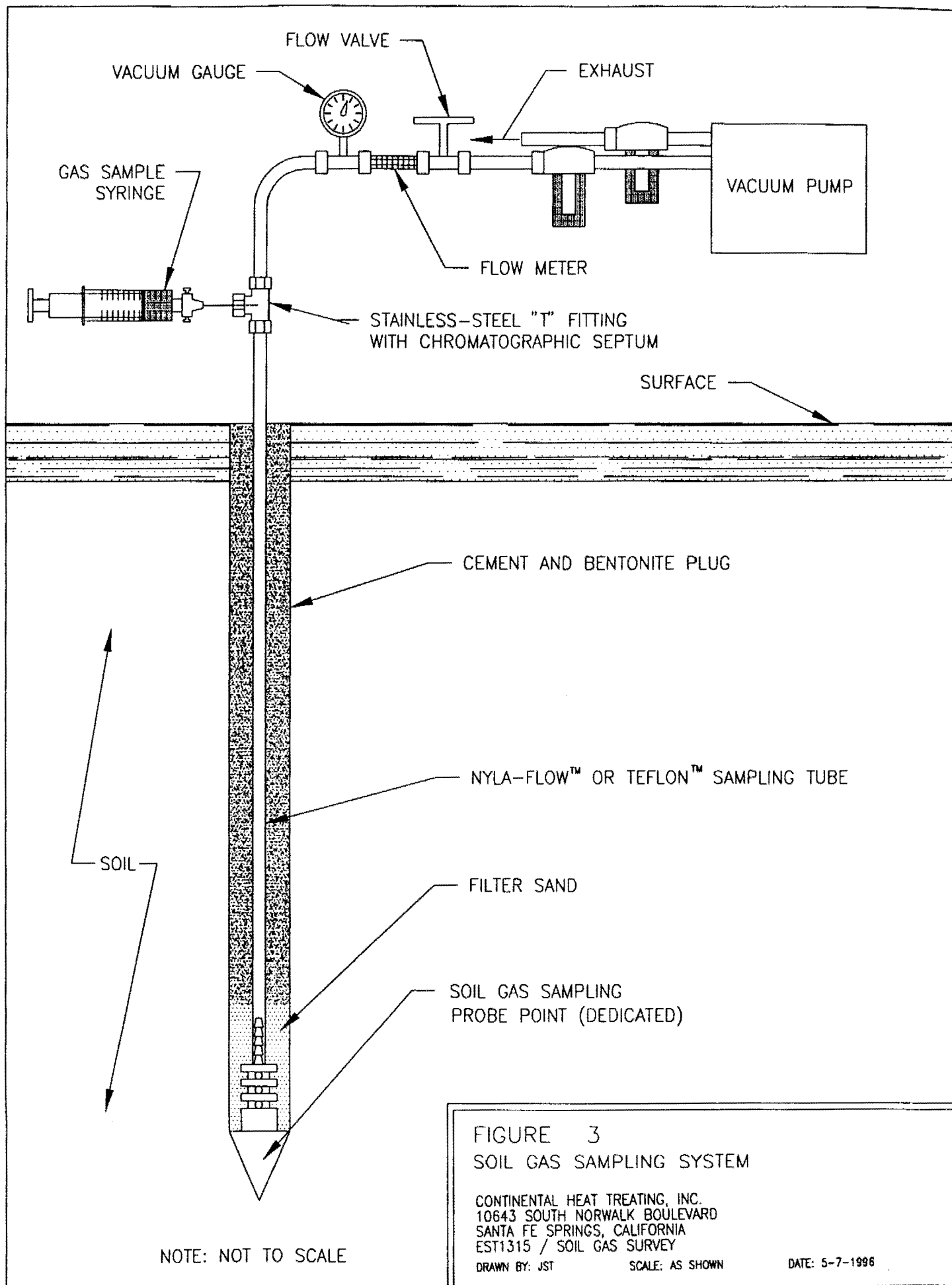
FIGURE 2
SOIL GAS SAMPLING PROBE

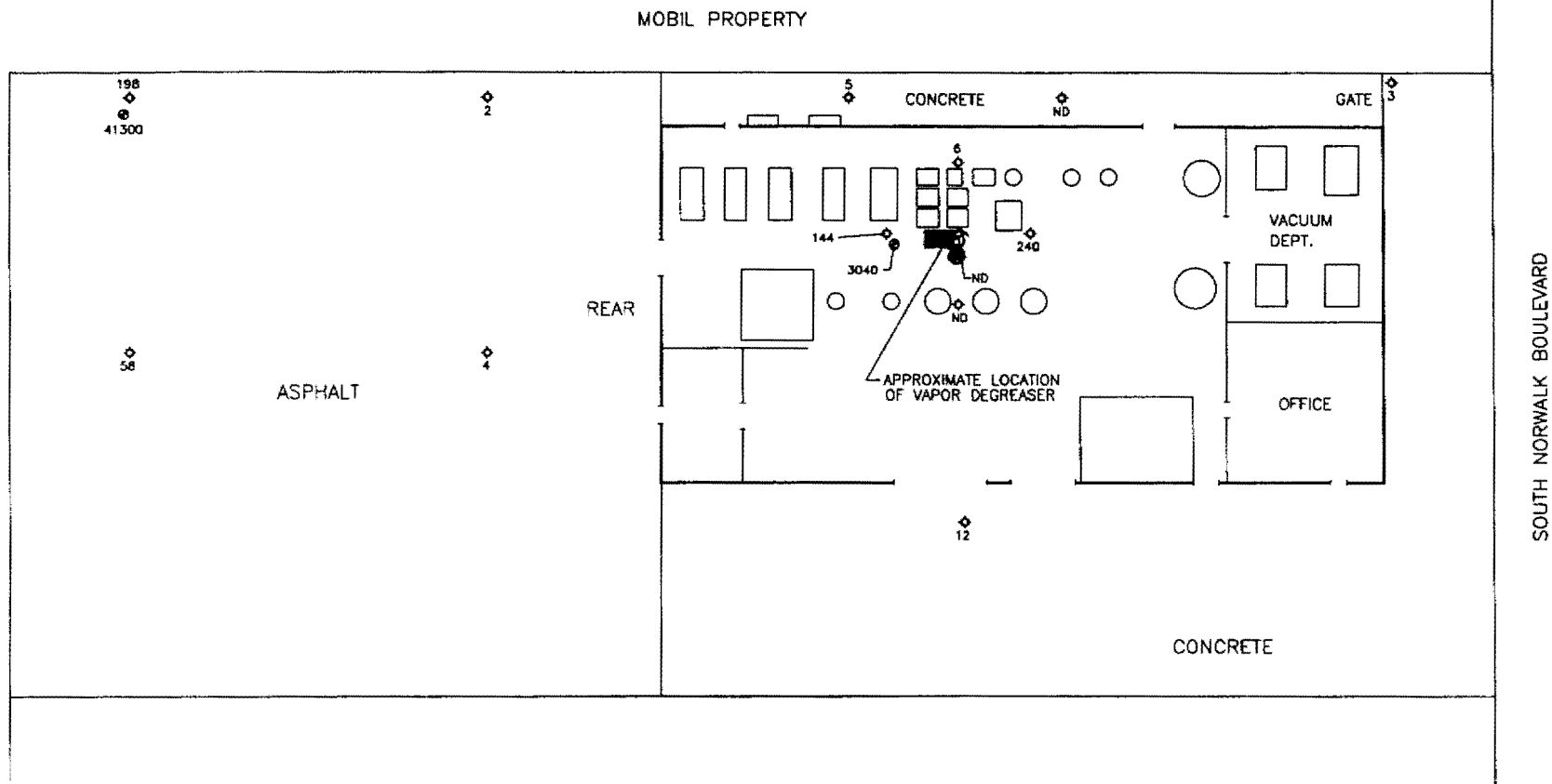
CONTINENTAL HEAT TREATING, INC.
10643 SOUTH NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA
EST1315 / SOIL GAS SURVEY

DRAWN BY: JST

SCALE: AS SHOWN

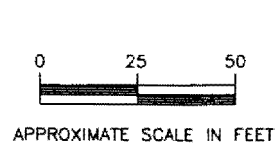
DATE: 5-7-1996





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EXPLANATION



5 or 36 APPROXIMATE LOCATION OF A 5-FOOT OR 15-FOOT SOIL GAS SAMPLING PROBE WITH DETECTED CONTRATIONS OF TETRACHLOROETHENE (PCE) ($\mu\text{g/L}$)

ND = NOT DETECTED

FIGURE 4

DETECTED CONCENTRATIONS OF TETRACHLOROETHENE
CONTINENTAL HEAT TREATING, INC.
10643 SOUTH NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA
EST1315 / SOIL GAS SURVEY

DRAWN BY: JST

SCALE: AS SHOWN

DATE: 5-7-1996

Appendix A

FACTORS AFFECTING THE GAS-PHASE DISTRIBUTION OF VOCs IN THE SUBSURFACE

FACTORS AFFECTING THE GAS-PHASE DISTRIBUTION OF VOCs IN THE SUBSURFACE

Soil and groundwater contamination by volatile organic compounds (VOCs) can often be detected by analyzing trace gases in soil just below ground surface. This technique is possible because many VOCs will volatilize and move by molecular diffusion away from source areas toward regions of lower concentrations. A gas phase concentration gradient from the source to adjacent areas is established.

The following factors affect the transport and gas phase distribution of VOCs in the subsurface.

1. The liquid-gas partitioning coefficient of the compounds of interest (the "volatility" of the compound).
2. The vapor diffusivity, which is a measure of how quickly an individual compound "spreads out" within a volume of gas.
3. Retardation of the individual compounds as they migrate in the soil gas. Retardation may be due to degradation, adsorption on the soil matrix, tortuosity of the soil profile, or entrapment in unconnected pores.
4. The presence of impeding layers, wetting fronts of freshwater, or perched water tables, between the regional water table and ground surface.
5. The presence of soil moisture around man-made structures such as clarifiers and sumps may suppress volatilization and diffusion of VOCs resulting in false negative or low soil gas concentrations.
6. The presence of contaminants from localized spills or in the ambient air.
7. Movement of soil gas in response to barometric pressure changes.
8. The preferential migration of gas through zones of greater permeability (e.g. natural lithologic variation or back-fill of underground utilities).
9. Soil temperature.

At most sites, many of these factors are unknown or poorly understood. Because of this uncertainty, soil gas sampling should be used in conjunction with other site-specific data.

Appendix B

FIELD ANALYSES RESULTS FOR AROMATIC AND HALOGENATED HYDROCARBONS

**(INCLUDING CALIBRATION REPORTS, QUALITY CONTROL REPORTS,
AND EXPLANATION OF METHOD DETECTION LIMITS)**

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
SITE LOCATED AT 10643 SOUTH NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA
25-TARGET COMPOUND LIST

PID/EICD #2 - 5/2/96
 FILE: 315ASGRP.WK3

SAMPLE ID			SG1-5	SG1-5	SG1-5	SG2-5	SG7-5	SG7-5	SG4-5	SG4-5
DATE			5/2/96	5/2/96	5/2/96	5/2/96	5/2/96	5/2/96	5/2/96	5/2/96
TIME			8:51	8:08	9:21	9:35	9:50	10:06	10:22	10:38
INJECTION VOLUME (ul)			500	500	500	500	500	100	500	50
PURGE VOLUME (ml)			100	200	400	100	100	100	100	100
VACUUM (in. Hg)			ND	ND	ND	ND	ND	ND	ND	ND
DILUTION FACTOR			1.0	1.0	1.0	1.0	1.0	5.0	1.0	10.0
COMMENTS										
	RT	ARF								
Dichlorodifluoromethane	2:50	8.77E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:26	4.97E+08	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
Chloroethane	3:55	3.10E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:75	8.79E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:36	1.37E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	4:56	2.49E+07	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
Methylene chloride	4:93	1.07E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethane	5:24	1.04E+09	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
1,1-Dichloroethane	5:72	8.38E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethane	5:39	1.13E+09	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
Chloroform	6:75	1.31E+09	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
1,1,1-Trichloroethane	7:01	1.18E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:22	1.48E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:48	9.07E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:47	1.32E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:28	1.19E+09	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
Toluene	10:04	8.74E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloroethane	10:52	8.68E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:51	1.43E+09	3.58E+08 5	2.44E+08 3	2.49E+08 3	0.00E+00 ND<1	3.25E+07 48 *	8.28E+08 58	4.37E+07 51 *	1.41E+07 188
1,1,1,2-Tetrachloroethane	12:36	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:40	8.04E+07	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
meta and para-Xylene	12:59	1.69E+08	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
ortho-Xylene	13:26	8.32E+07	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<10
1,1,2,2-Tetrachloroethane	14:34	8.66E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
 RT = retention time
 ul = microliter
 in. Hg = inches of Mercury

Concentrations reported in micrograms per liter (ug/L)
 ARF = average response factor
 ml = milliliter
 * = compound detected out of calibration range

5/2/96



TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
SITE LOCATED AT 10643 SOUTH NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA
25-TARGET COMPOUND LIST

FIG/ELCD #2 - 5/2/86
FILE: 315ASGRR.WK3

SAMPLE ID			SG8-5	SG8-5	SG5-5	SG10-5	SG11-5	SG11-5	SG12-5	SG13-5
DATE			5/2/86	5/2/86	5/2/86	5/2/86	5/2/86	5/2/86	5/2/86	5/2/86
TIME			10:54	11:09	11:29	11:45	12:01	12:19	12:37	12:53
INJECTION VOLUME (ul)			500	500	500	500	500	50	500	500
PURGE VOLUME (ml)			100	100	100	100	100	100	100	100
VACUUM (in. Hg)			ND	ND	ND	ND	ND	ND	ND	ND
DILUTION FACTOR			1.0	1.0	1.0	1.0	1.0	10.0	1.0	1.0
COMMENTS	RT	ARF								
Dichlorodifluoromethane	2:90	8.77E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.14E+05	0.00E+00	0.00E+00	2.01E+07
Vinyl chloride	3:26	4.37E+08	ND<1	ND<1	ND<1	ND<1	4	ND<10	ND<1	82 *
Chloroethane	3:55	3.10E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:75	6.79E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:36	1.37E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	4:36	2.49E+07	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<10	0.00E+00 ND<1	8.85E+04 7
Methylene chloride	4:53	1.07E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethane	5:24	1.04E+09	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<10	0.00E+00 ND<1	3.85E+07 74 *
1,1-Dichloroethane	5:72	9.38E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethane	6:39	1.13E+09	5.13E+05 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	2.63E+07 47 *	3.97E+06 71	1.87E+06 3	6.44E+07 114 *
Chloroform	6:75	1.31E+09	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<10	0.00E+00 ND<1	0.00E+00 ND<1
1,1,1-Trichloroethane	7:01	1.18E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:22	1.48E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:46	9.07E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:47	1.32E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethane	8:26	1.19E+09	3.13E+05 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	2.98E+07 50 *	5.26E+06 88	1.87E+06 3	4.50E+07 78 *
Toluene	10:04	8.74E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloroethane	10:52	9.68E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethane	10:51	1.43E+09	3.09E+06 4	1.51E+06 2	2.23E+05 ND<1	2.88E+05 ND<1	4.59E+07 64 *	1.72E+07 240	4.44E+06 8	4.23E+07 89 *
1,1,1,2-Tetrachloroethane	12:36	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:40	6.04E+07	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	9.79E+04 3	8.01E+03 ND<10	0.00E+00 ND<1	1.59E+05 5
meta and para-Xylene	12:59	1.69E+08	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	2.75E+05 3	1.51E+04 ND<10	0.00E+00 ND<1	6.23E+05 7
ortho-Xylene	13:26	6.32E+07	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<1	9.18E+04 3	0.00E+00 ND<10	0.00E+00 ND<1	1.13E+05 4
1,1,2,2-Tetrachloroethane	14:34	6.89E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of Mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = compound detected out of calibration range

5/2/86

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
SITE LOCATED AT 10643 SOUTH NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELOD #2 - 5/2/98
 FILE: 318ABGRP.WK3

SAMPLE ID			SG13-5	SG13-5	SG13-5	SG9-5	SG9-5	SG3-5	SG14-15	SG14-15
DATE			5/2/98	5/2/98	5/2/98	5/2/98	5/2/98	5/2/98	5/2/98	5/2/98
TIME			13:11	13:27	13:42	13:58	14:12	14:31	15:09	15:23
INJECTION VOLUME (ul)			50	25	10	500	100	500	500	250
PURGE VOLUME (ml)			100	100	100	100	100	100	170	170
VACUUM (in. Hg)			ND	ND	ND	ND	ND	ND	ND	ND
DILUTION FACTOR			10.0	20.0	50.0	1.0	5.0	1.0	1.0	180.0
COMMENTS			RT	ARF						Dilution 1:80
Dichlorodifluoromethane	2:50	8.77E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:28	4.37E+08	1.61E+08 74	7.77E+05 71	1.80E+05 ND<50	1.48E+05 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<180
Chloroethane	3:55	3.10E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:75	6.70E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:38	1.37E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:36	2.48E+07	8.20E+03 ND<10	5.48E+03 ND<20	2.57E+03 ND<50	8.13E+03 ND<1	3.68E+03 ND<5	9.59E+03 ND<1	0.00E+00 ND<1	0.00E+00 ND<180
Methylene chloride	4:93	1.07E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:24	1.04E+08	9.04E+06 174	4.33E+06 167	1.03E+06 59	4.69E+06 8	1.89E+05 ND<5	1.88E+05 ND<1	0.00E+00 ND<1	0.00E+00 ND<180
1,1-Dichloroethane	5:72	9.38E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:38	1.15E+09	2.51E+07 448 *	1.85E+07 692 *	8.50E+06 758	2.81E+07 45 *	3.93E+06 35	3.38E+06 8	3.33E+06 8	0.00E+00 ND<180
Chloroform	6:75	1.31E+09	0.00E+00 ND<10	0.00E+00 ND<20	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	7.72E+05 1	0.00E+00 ND<180
1,1,1-Trichloroethane	7:01	1.18E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	1.19E+05 ND<1	0.00E+00 ND
Carbon tetrachloride	7:22	1.48E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:46	9.07E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:47	1.32E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:28	1.18E+09	1.47E+07 246	7.11E+06 238	1.47E+06 124	8.52E+06 14	1.02E+06 9	3.19E+06 5	1.75E+07 30	0.00E+00 ND<180
Toluene	10:04	8.74E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloroethane	10:52	9.88E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:51	1.43E+09	1.03E+07 144	5.14E+06 144	8.95E+05 63	8.31E+06 12	1.52E+06 11	2.13E+06 3	3.75E+06 525 *	5.76E+07 12900 *
1,1,1,2-Tetrachloroethane	12:38	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:40	8.04E+07	7.54E+03 ND<10	0.00E+00 ND<20	0.00E+00 ND<50	4.94E+03 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<180
meta and para-Xylene	12:59	1.89E+08	2.37E+04 ND<10	0.00E+00 ND<20	0.00E+00 ND<50	1.15E+04 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<180
ortho-Xylene	13:26	8.32E+07	0.00E+00 ND<10	0.00E+00 ND<20	0.00E+00 ND<50	5.24E+03 ND<1	0.00E+00 ND<5	0.00E+00 ND<1	0.00E+00 ND<1	0.00E+00 ND<180
1,1,2,2-Tetrachloroethane	14:34	8.86E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
 RT = retention time
 ul = microliter
 in. Hg = inches of Mercury

Concentrations reported in micrograms per liter (ug/L)
 ARF = average response factor
 ml = milliliter
 * = compound detected out of calibration range

5/2/98

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
SITE LOCATED AT 10643 SOUTH NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA
25-TARGET COMPOUND LIST

PI/ELOD #2 - 5/2/96
FILE: 315A9GRP.WK3

SAMPLE ID			SG14-15	SG15-15	SG15-15	SG15-15	SG15-15	NA	NA	NA
DATE			5/2/96	5/2/96	5/2/96	5/2/96	5/2/96	NA	NA	NA
TIME			15:48	16:12	16:34	16:52	17:06	NA	NA	NA
INJECTION VOLUME (ul)			25	500	50	10	5	NA	NA	NA
PURGE VOLUME (ml)			170	170	170	170	170	NA	NA	NA
VACUUM (in. Hg)			ND	ND	ND	ND	ND	NA	NA	NA
DILUTION FACTOR			1600.0	1.0	10.0	50.0	100.0	NA	NA	NA
COMMENTS			RT	ARF	Dilution 1:80					
Dichlorodifluoromethane			2:90	8.77E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride			3:26	4.37E+08	0.00E+00 ND < 1600	4.24E+07 194 *	4.61E+06 21.1	4.76E+05 109	1.20E+05 ND < 100	0.00E+00 ND
Chloroethane			3:55	3.10E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane			3:75	8.79E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane			4:36	1.37E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane			4:36	2.49E+07	0.00E+00 ND < 1600	2.08E+05 17	1.91E+04 15	2.89E+03 ND < 50	0.00E+00 ND < 100	0.00E+00 ND
Methylene chloride			4:93	1.07E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethane			5:24	1.04E+08	0.00E+00 ND < 1600	2.62E+07 50 *	5.92E+06 114	2.58E+05 ND < 50	9.67E+04 ND < 100	0.00E+00 ND
1,1-Dichloroethane			5:72	9.38E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethane			5:36	1.13E+09	0.00E+00 ND < 1600	6.09E+07 106 *	1.95E+07 346 *	3.03E+06 269	7.40E+05 131	0.00E+00 ND
Chloroform			6:75	1.31E+09	0.00E+00 ND < 1600	0.00E+00 ND < 1	0.00E+00 ND < 10	0.00E+00 ND < 50	0.00E+00 ND < 100	0.00E+00 ND
1,1,1-Trichloroethane			7:01	1.18E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride			7:22	1.48E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene			7:46	9.07E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane			7:47	1.32E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethane			8:26	1.19E+09	0.00E+00 ND < 1600	8.52E+07 110 *	2.10E+07 352 *	2.68E+06 225	7.61E+05 128	0.00E+00 ND
Toluene			10:04	8.74E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloroethane			10:52	9.88E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethane			10:51	1.43E+09	1.84E+07 41300	2.04E+08 288 *	8.17E+07 1140 *	3.37E+07 2380 *	2.17E+07 3040	0.00E+00 ND
1,1,1,2-Tetrachloroethane			12:36	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene			12:40	8.04E+07	0.00E+00 ND < 1600	1.96E+08 65 *	1.10E+05 36	8.34E+03 ND < 50	0.00E+00 ND < 100	0.00E+00 ND
meta and para-Xylene			12:59	1.89E+08	0.00E+00 ND < 1600	3.15E+08 37 *	2.05E+05 24	1.28E+04 ND < 50	0.00E+00 ND < 100	0.00E+00 ND
ortho-Xylene			13:26	8.32E+07	0.00E+00 ND < 1600	1.67E+08 53 *	6.67E+04 21	1.32E+04 ND < 50	0.00E+00 ND < 100	0.00E+00 ND
1,1,2,2-Tetrachloroethane			14:34	8.86E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of Mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = compound detected out of calibration range

5/2/96

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 2, 1996

PID/ELCD #2
FILE: 315AQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:90	0			0.00E+00	0		
RF		0.00E+00	8.77E+07	NA	ND	0.00E+00	8.77E+07	NA
Vinyl chloride	3:26	2065017			0.00E+00	2105921		
RF		4.13E+08	4.37E+08	-5	ND	4.21E+08	4.37E+08	-4
Chloroethane	3:55	0			0.00E+00	0		
RF		0.00E+00	3.10E+08	NA	ND	0.00E+00	3.10E+08	NA
Trichlorofluoromethane	3:75	0			0.00E+00	0		
RF		0.00E+00	6.79E+08	NA	ND	0.00E+00	6.79E+08	NA
1,1,2-Trichloro-trifluoroethane	4:36	0			0.00E+00	0		
RF		0.00E+00	1.37E+09	NA	ND	0.00E+00	1.37E+09	NA
1,1-Dichloroethene (PID)	4:36	119316			0.00E+00	102245		
RF		2.39E+07	2.49E+07	-4	ND	2.04E+07	2.49E+07	-18
Methylene chloride	4:93	0			0.00E+00	0		
RF		0.00E+00	1.07E+09	NA	ND	0.00E+00	1.07E+09	NA
trans-1,2-Dichloroethene	5:24	5246480			0.00E+00	4964815		
RF		1.05E+09	1.04E+09	1	ND	9.93E+08	1.04E+09	-5
1,1-Dichloroethane	5:72	4987071			0.00E+00	4961129		
RF		9.97E+08	9.38E+08	6	ND	9.92E+08	9.38E+08	6
Cis-1,2-Dichloroethene	6:39	4954397			0.00E+00	4654370		
RF		9.91E+08	1.13E+09	-12	ND	9.31E+08	1.13E+09	-18
Chloroform	6:75	6636963			0.00E+00	5894290		
RF		1.33E+09	1.31E+09	1	ND	1.18E+09	1.31E+09	-10
1,1,1-Trichloroethane	7:01	6017679			0.00E+00	5347336		
RF		1.20E+09	1.18E+09	2	ND	1.07E+09	1.18E+09	-9
Carbon tetrachloride	7:22	0			0.00E+00	0		
RF		0.00E+00	1.48E+09	NA	ND	0.00E+00	1.48E+09	NA
Benzene (PID)	7:46	463800			0.00E+00	440931		
RF		9.28E+07	9.07E+07	2	ND	8.82E+07	9.07E+07	-3
1,2-Dichloroethane	7:47	6720263			0.00E+00	6730511		
RF		1.34E+09	1.32E+09	2	ND	1.35E+09	1.32E+09	2
Trichloroethene	8:28	5853631			0.00E+00	5256518		
RF		1.17E+09	1.19E+09	-2	ND	1.05E+09	1.19E+09	-12
Toluene (PID)	10:04	432428			0.00E+00	436567		
RF		8.65E+07	8.74E+07	-1	ND	8.73E+07	8.74E+07	-0
1,1,2-Trichloroethane	10:62	5374968			0.00E+00	5001922		
RF		1.07E+09	9.68E+08	11	ND	1.00E+09	9.68E+08	3
Tetrachloroethene	10:91	6993416			0.00E+00	5891035		
RF		1.40E+09	1.43E+09	-2	ND	1.18E+09	1.43E+09	-18
1,1,1,2-Tetrachloroethane	12:36	0			0.00E+00	0		
RF		0.00E+00	1.12E+09	NA	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:40	301351			0.00E+00	294834		
RF		6.03E+07	6.04E+07	-0	ND	5.90E+07	6.04E+07	-2
m,p-Xylene (PID)	12:59	865077			0.00E+00	875500		
RF		1.73E+08	1.69E+08	2	ND	1.75E+08	1.69E+08	4
o-Xylene (PID)	13:26	318509			0.00E+00	314029		
RF		6.37E+07	6.32E+07	1	ND	6.28E+07	6.32E+07	-1
1,1,2,2-Tetrachloroethane	14:34	0			0.00E+00	0		
RF		0.00E+00	8.86E+08	NA	ND	0.00E+00	8.86E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/2/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

TABLE B-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
APRIL 24, 1996

FILE: 42493PT.WKS

STANDARD CONC. (ug/L)		5000	5000	5000	AVERAGE		RELATIVE
INJECTION VOLUME(uL)		0.50	1.00	2.00	RESPONSE	STANDARD	% STANDARD
COMPOUND/WEIGHT(ug)	RT	0.0025	0.0050	0.0100	FACTOR	DEVIATION	DEVIATION
Dichlorodifluoromethane	2.90	194482	420918	1012432			
CF		7.78E+07	8.42E+07	1.01E+08	8.77E+07	1.21E+07	14
Vinyl chloride	3.26	958056	2347988	4591034			
CF		3.83E+08	4.70E+08	4.59E+08	4.37E+08	4.71E+07	11
Chloroethane	3.55	803430	1519289	3037713			
CF		3.21E+08	3.04E+08	3.04E+08	3.10E+08	1.01E+07	3
Trichlorofluoromethane	3.75	1670633	3327440	7030350			
CF		6.68E+08	6.65E+08	7.03E+08	6.79E+08	2.09E+07	3
1,1,2-Trichloro-trifluoroethane	4.36	3068454	7195634	14318027			
CF		1.23E+09	1.44E+09	1.43E+09	1.37E+09	1.20E+08	9
1,1-Dichloroethane (PID)	4.36	55032	110627	305725			
CF		2.20E+07	2.21E+07	3.06E+07	2.49E+07	4.91E+06	20
Methylene chloride	4.93	2517211	5506436	11128812			
CF		1.01E+09	1.10E+09	1.11E+09	1.07E+09	5.81E+07	5
trans-1,2-Dichloroethane	5.24	2272591	5332875	11409777			
CF		9.09E+08	1.07E+09	1.14E+09	1.04E+09	1.18E+08	11
1,1-Dichloroethane	5.72	2108242	4917295	9875290			
CF		8.43E+08	9.83E+08	9.88E+08	9.38E+08	8.21E+07	9
cis-1,2-Dichloroethane	6.39	2630404	5837384	11568102			
CF		1.05E+09	1.17E+09	1.16E+09	1.13E+09	6.37E+07	6
Chloroform	6.75	3071756	6811353	13319420			
CF		1.23E+09	1.36E+09	1.33E+09	1.31E+09	7.00E+07	5
1,1,1-Trichloroethane	7.01	2879068	6038728	11710360			
CF		1.15E+09	1.21E+09	1.17E+09	1.18E+09	2.85E+07	2
Carbon tetrachloride	7.22	3429459	7707342	15377948			
CF		1.37E+09	1.54E+09	1.54E+09	1.48E+09	9.69E+07	7
Benzene (PID)	7.46	202287	463128	987006			
CF		8.09E+07	9.26E+07	9.87E+07	9.07E+07	9.04E+06	10
1,2-Dichloroethane	7.47	3018098	6997910	13646475			
CF		1.21E+09	1.40E+09	1.36E+09	1.32E+09	1.02E+08	8
Trichloroethene	8.28	2720582	6295165	12216627			
CF		1.09E+09	1.26E+09	1.22E+09	1.19E+09	8.98E+07	8
Toluene (PID)	10.04	189615	473986	915154			
CF		7.58E+07	9.48E+07	9.15E+07	8.74E+07	1.01E+07	12
1,1,2-Trichloroethane	10.62	2201954	5032679	10166793			
CF		8.81E+08	1.01E+09	1.02E+09	9.68E+08	7.57E+07	8
Tetrachloroethene	10.91	3472760	7181440	14630275			
CF		1.39E+09	1.44E+09	1.46E+09	1.43E+09	3.74E+07	3
1,1,1,2-Tetrachloroethane	12.36	2520257	5831261	11888172			
CF		1.01E+09	1.17E+09	1.19E+09	1.12E+09	9.85E+07	9
Ethylbenzene (PID)	12.40	128137	303366	692977			
CF		5.13E+07	6.07E+07	6.93E+07	6.04E+07	9.02E+06	15
m,p-Xylene (PID)	12.59	375763	841108	1871726			
CF		1.50E+08	1.68E+08	1.87E+08	1.69E+08	1.84E+07	11
o-Xylene (PID)	13.26	149216	304855	688187			
CF		5.97E+07	6.10E+07	6.88E+07	6.32E+07	4.94E+06	8
1,1,2,2-Tetrachloroethane	14.34	1929867	4749621	9372528			
CF		7.72E+08	9.50E+08	9.37E+08	8.86E+08	9.93E+07	11

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

4/24/96

TABLE B-4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
APRIL 24, 1996

PIDVELCD #2
FILE: 424QCLO.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:90	502880			0.00E+00	0		
RF		1.01E+08	8.77E+07	15	ND	0.00E+00	8.77E+07	NA
Vinyl chloride	3:26	2681826			0.00E+00	0		
RF		5.36E+08	4.37E+08	23	ND	0.00E+00	4.37E+08	NA
Chloroethane	3:55	1507950			0.00E+00	0		
RF		3.02E+08	3.10E+08	-3	ND	0.00E+00	3.10E+08	NA
Trichlorofluoromethane	3:75	3673783			0.00E+00	0		
RF		7.35E+08	6.79E+08	8	ND	0.00E+00	6.79E+08	NA
1,1,2-Trichloro-trifluoroethane	4:36	7582873			0.00E+00	0		
RF		1.52E+09	1.37E+09	11	ND	0.00E+00	1.37E+09	NA
1,1-Dichloroethene (PID)	4:36	105830			0.00E+00	0		
RF		2.12E+07	2.49E+07	-15	ND	0.00E+00	2.49E+07	NA
Methylene chloride	4:93	5762127			0.00E+00	0		
RF		1.15E+09	1.07E+09	8	ND	0.00E+00	1.07E+09	NA
trans-1,2-Dichloroethane	5:24	5517709			0.00E+00	0		
RF		1.10E+09	1.04E+09	6	ND	0.00E+00	1.04E+09	NA
1,1-Dichloroethane	5:72	5125724			0.00E+00	0		
RF		1.03E+09	9.38E+08	9	ND	0.00E+00	9.38E+08	NA
Cis-1,2-Dichloroethane	6:39	6113127			0.00E+00	0		
RF		1.22E+09	1.13E+09	8	ND	0.00E+00	1.13E+09	NA
Chloroform	6:75	7133083			0.00E+00	0		
RF		1.43E+09	1.31E+09	9	ND	0.00E+00	1.31E+09	NA
1,1,1-Trichloroethane	7:01	6414289			0.00E+00	0		
RF		1.28E+09	1.18E+09	9	ND	0.00E+00	1.18E+09	NA
Carbon tetrachloride	7:22	8044397			0.00E+00	0		
RF		1.61E+09	1.48E+09	9	ND	0.00E+00	1.48E+09	NA
Benzene (PID)	7:46	439057			0.00E+00	0		
RF		8.78E+07	9.07E+07	-3	ND	0.00E+00	9.07E+07	NA
1,2-Dichloroethane	7:47	7005227			0.00E+00	0		
RF		1.40E+09	1.32E+09	6	ND	0.00E+00	1.32E+09	NA
Trichloroethane	8:28	6508275			0.00E+00	0		
RF		1.30E+09	1.19E+09	9	ND	0.00E+00	1.19E+09	NA
Toluene (PID)	10:04	404203			0.00E+00	0		
RF		8.08E+07	8.74E+07	-8	ND	0.00E+00	8.74E+07	NA
1,1,2-Trichloroethane	10:62	5143977			0.00E+00	0		
RF		1.03E+09	9.68E+08	6	ND	0.00E+00	9.68E+08	NA
Tetrachloroethane	10:91	7195941			0.00E+00	0		
RF		1.44E+09	1.43E+09	1	ND	0.00E+00	1.43E+09	NA
1,1,1,2-Tetrachloroethane	12:38	5779558			0.00E+00	0		
RF		1.16E+09	1.12E+09	3	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:40	290953			0.00E+00	0		
RF		5.82E+07	6.04E+07	-4	ND	0.00E+00	6.04E+07	NA
m,p-Xylene (PID)	12:59	814875			0.00E+00	0		
RF		1.63E+08	1.69E+08	-4	ND	0.00E+00	1.69E+08	NA
o-Xylene (PID)	13:26	298940			0.00E+00	0		
RF		5.98E+07	6.32E+07	-5	ND	0.00E+00	6.32E+07	NA
1,1,2,2-Tetrachloroethane	14:34	4975911			0.00E+00	0		
RF		9.95E+08	8.86E+08	12	ND	0.00E+00	8.86E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

04/24/96

ANALYST: David M. Pride

REVIEWED BY: Ragi Abraham

Table B-5
Environmental Support Technologies, Inc.
Detection Limits for Soil Gas Surveys

Detection Limits or Reportable Limits of Quantitation for Halogenated and Aromatic Hydrocarbons are 1 ug/L when the injection volume is 500 uL. For lesser injection volumes detection limits are listed below.

Injection Volume (uL)	Detection Limit (ug/L)
500	1.0
250	2.0
200	2.5
100	5.0
80	6.3
60	8.3
50	10.0
40	12.5
20	25.0
10	50.0
5	100.0
1	500.0